Claims

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- 1. A lamp comprising:
- a glass bulb;
- a base attached to one end of the glass bulb;

leads for supplying electrical power; and

lead-free solder electrically connecting the leads to the base,

wherein the lead-free solder is composed mainly of Sn, further contains, at least, between 5% and 40% inclusive of Sb and between 0% and 10% inclusive of Cu by mass, and has a solidus temperature of at least 235°C.

- 2. A lamp comprising:
- a glass bulb having a concave portion;

a base attached to the glass bulb so as to cover at least part of the concave portion;

a lead for supplying electrical power having an end section located in the concave portion; and

20 lead-free solder poured into the concave section to electrically connect the base and the lead,

wherein the lead-free solder is composed mainly of Sn, further contains, at least, between 5% and 40% inclusive of Sb and between 0% and 10% inclusive of Cu by mass, and has a solidus temperature of at least 235°C.

3. The lamp of Claim 1 or 2,

wherein the lead-free solder further contains Ni, Co, Fe, Mo,

Cr, and Mn with a combined mass content of between 0% and 0.5% inclusive.

4. The lamp of Claim 1 or 2,

wherein the lead free solder further contains Ag and Bi with

5 a combined mass content of between 0% and 1% inclusive.

5 The lamp of Claim 1 or 2,

wherein, the lead-free solder further contains at least one of P, Ge and Ga, and a combined mass content of P, Ge, and Ga is between 0.001% and 0.05% inclusive.